

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PCT1868-00936/h	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/006488	International filing date (day/month/year) 18 June 2003 (18.06.2003)	Priority date (day/month/year) 18 June 2002 (18.06.2002)
International Patent Classification (IPC) or national classification and IPC A23L 1/36, 1/20, 1/212, 1/275, C09B 61/00, A23L 1/27, 2/58, 2/02, A23P 1/08, A61K 9/28		
Applicant WILD FLAVORS BERLIN GMBH & CO. KG		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>1</u> sheets.</p> <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application
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Date of submission of the demand 19 December 2003 (19.12.2003)	Date of completion of this report 03 November 2004 (03.11.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/006488

I. Basis of the report

1. With regard to the elements of the international application:*

 the international application as originally filed the description:pages 1-10, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the claims:

pages _____, as originally filed

pages _____, as amended (together with any statement under Article 19)

pages _____, filed with the demand

pages 1-8, filed with the letter of 12 December 2003 (12.12.2003) the drawings:pages 1/4-4/4, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

 the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. The amendments have resulted in the cancellation of: the description, pages _____ the claims, Nos. 9-11 the drawings, sheets/fig _____5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/EP 03/06488

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	2, 6, 8	YES
	Claims	1, 3, 4, 5, 7	NO
Inventive step (IS)	Claims		YES
	Claims	2, 6, 8	NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO

2. Citations and explanations

1. Reference is made to the following documents:

D1: KUCUK M M: 'Liquefaction of hazelnut seed coat by supercritical gas extraction', ENERGY CONVERSION AND MANAGEMENT, ELSEVIER SCIENCE PUBLISHERS, OXFORD, GB, Vol. 36, No. 2, 1 February 1995 (1995-02-01), pages 145-148, XP004040058 ISSN 0196-8904

D2: US-A-2 510 119 (LATHROP ELBERT C) 6 June 1950 (1950-06-06)

D3: US-A-4 481 226 (NESHEIWAT DONNA M ET AL.) 6 November 1984 (1984-11-06)

D5: DATABASE FSTA [Online] INTERNATIONAL FOOD INFORMATION SERVICE (IFIS), FRANKFURT/MAIN, DE; MATHEW A G ET AL.: 'Polyphenols of cashew kernel testa.' Database accession no. 70-4-11-j1267 XP002253440 & JOURNAL OF FOOD SCIENCE 1970 CENTRAL FOOD TECHNOLOGIES RES. INST., MYSORE, INDIA, Vol. 35, No. 2, pages 140-143

D6: DATABASE WPI Section Ch, Week 197743 Derwent Publications Ltd., London, GB; Class D13, AN 1977-76658Y XP002253442 & JP 52 109529 A (EZAKI GLICO CO), 13 September 1977 (1977-09-13)

D8: US-A-4 383 833 (HOFFMANN PAUL) 17 May 1983

(1983-05-17)

D11: US-A-5 908 650 (RICHHEIMER STEVEN L ET AL.)

1 June 1999 (1999-06-01)

D12 was not cited in the international search report.

D12: JP-A-56145955 (abstract, Patent Abstracts of Japan)

2. The application is directed to a dry extract of roasted membranes or remains of the fruit of nuts or pulses (claims 1 and 2), a method for producing said extract (claims 3 and 4), and various uses of said extract (claims 5 to 8).

3. Novelty (PCT Article 33(2))

D12 discloses the production of a dry extract from roasted tamarind membranes. Tamarinds are classed as pulses. This extract is obtained by removal of the solvent (EtOH), i.e. by evaporation. This extract is intended to be used as a colouring. The production of the extract therefore corresponds to the production of a dry extract according to the invention (see examples 1 and 6). In the opinion of the Examining Authority, the term "dry extract" does not automatically imply the presence of a powder but only the virtually complete absence of a solvent. Furthermore, the water content of the dry extracts according to the invention is not defined.

The subject matter of claims 1, 3, 4, 5 and 7 is therefore anticipated.

4. Inventive step (PCT Article 33(3))

4.1 Claims 1 to 2

The conversion of the D12 extract into a powder, if this should be claimed, is common practice for a person skilled in the art, since a longer shelf life or better handling can thereby be achieved. Both D7 and D8 disclose, for example, different methods for the production and use of a natural colouring matter extract (D7, page 4; example 4, example 6; D8, columns 2 to 3).

The properties of the extract are inherent, which means that the extract will always exhibit a film-forming property if it is used in this way (see, for example, the examples in the application).

D2 discloses the production of a colouring extract from membranes of nuts of the genera *Hicora* or *Corylus* (probably especially *Corylus maxima/Filbert*) using conventional methods. The membranes can be obtained from the "inner lining of the shell" or "partitions between sections of nut meats") (column 2, lines 13 to 26; column 3, lines 50 to 67; column 6, lines 16 to 23).

As also indicated in the description, nuts are roasted with testa attached. This roasted testa is produced as a by-product if lighter nut meat is required (see D1, page 146, and also page 2 of the description).

In the light of D2, together with general common knowledge in the art and D1, it is considered obvious to produce a dry extract from roasted hazelnut membranes, especially the testa.

In view of their origin, the claimed extracts contain polyphenols, which belong to different substance classes and are coloured either in monomer form, e.g. flavonols and anthocyanins, or in the polymerised state, e.g. cinnamic acid, coumarin or benzoic acid derivatives, and/or catechols. These polymerisation reactions, and hence colour intensification, are affected by the presence of atmospheric oxygen and/or by temperature, e.g. roasting. This is generally known to a person skilled in the art.

The subject matter of claims 1 and 2 does not therefore involve an inventive step.

4.2 Claims 3 and 4

The same arguments apply as those applicable to claims 3 and 4 under point 4.1.

4.3 Claims 5 to 8

The use of an extract of roasted nut membranes for colouring purposes is suggested to a person skilled in the art by the prior art and general common knowledge in the art (see D2 in combination with general common knowledge in the art). The subject matter of claims 5 and 7 is therefore suggested by D2 in combination with general common knowledge in the art.

Claim 6 is directed to a use for the stabilisation of anthocyanins and/or anthocyanidines. Different substances from the class of polyphenols have already been used to stabilise these aforementioned colouring matters (see, for example, D3 or D11 and

literature cited therein): In D11, for example, an extract of peanut hulls was successfully used to stabilise anthocyanins. It is therefore considered obvious to a person skilled in the art to use the D12 extract to stabilise these unstable colouring matters. The same applies to an extract of roasted nut membranes.

In the light of common practice in the art of colouring, the application of the colouring matter extract to foodstuff surfaces or other surfaces cannot be considered inventive with respect to D12 (claim 8). The same applies to an extract of roasted nut membranes.

5. Claims 1 to 8 satisfy the requirements of PCT Article 33(4).